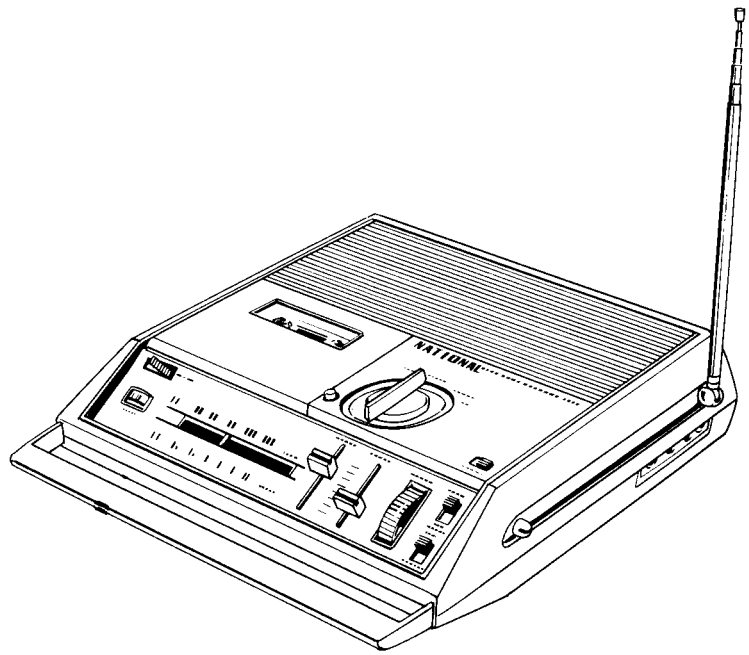
MODEL RQ-232S

SOLID STATE CASSETTE TAPE RECORDER WITH FM/AM RADIO



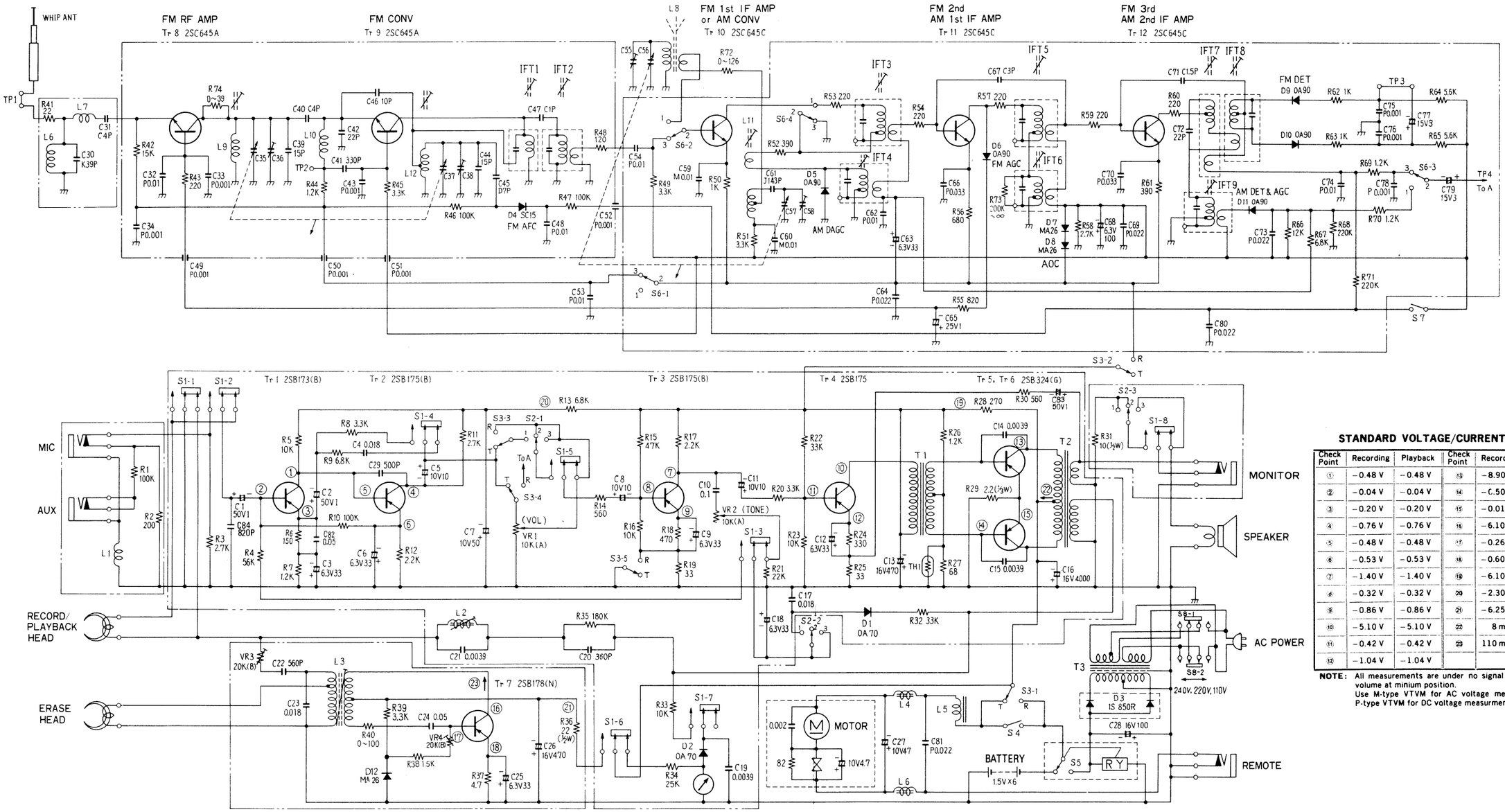
SPECIFICATIONS

Power Source:	AC: 110, 220, 240 Volts 50/60 Hz DC: 9 Volts (6 UM-2)
Motor:	Mechanical governor motor
Operation System:	Lever operation
Tape Speed:	1-7/8 ips
Transistors:	2SB173 (1) 2SB175 (3) 2SB324 (2) 2SB178 (1) 2SC645 (5)
Diodes:	OA70 (2) 1S1850R (1) SC15 (1) OA90 (5) MA26 (3)
Track System:	2 track
Music Power:	max. 2.5W
Frequency Response:	50 – 10,000 Hz
Recording System:	AC bias
Erasing System :	AC erase
Fast Forward Time:	Approx. 230 seconds with cassette tape RT-60
Rewind Time:	Approx. 110 seconds with cassette tape RT-60
Built-in Speaker:	4" dynamic speaker
Inputs:	"MIC" input 200Ω "AUX" input 100KΩ
Outputs:	"MONITOR" output 8Ω "REMOTE" output
Radio Sensitivity & Frequency:	FM 2μV/50mW 87 – 108 MHz AM100μV/50mW 525 – 1605 kHz
Dimensions:	11-1/4" (W) x 3-3/8" (H) x 11-1/4" (D)
Weight:	7-3/4 lbs

RQ-232S

Item		Value
Recording Bias Current	(mA)	0.45 ± 0.03
Recording Signal Current	(mA)	0.035
Input Level	(dB) at 1 kHz	MIC −75 ± 5 AUX −20 ± 5
Playback Amp. Gain	(dB) at 1 kHz	− 80 ± 3
Erasing Current	(V)	$3.5^{+0.2}_{-0.4}$
Erasing Rate	more than (dB)	55
Overall Signal to Noise Ratio	more than (dB)	35
Cross Talk	more than (dB)	55
Rewind Time	less than (sec.)	80 (300 ft)
Fast Forward Time	less than (sec.)	80 (300 ft)
Wow & Flutter 7-1/2 ips	less than (%)	—
3-3/4 ips	less than (%)	—
1-7/8 ips	less than (%)	0.45 (RMS)
Tape Speed Accuracy	within (%)	± 3
Tape Speed Fluctuation	less than (%)	2
Takeup Tension	(gr-cm)	30 − 60
Fast Forward Tension	(gr-cm)	50
Rewind Tension	(gr-cm)	50
Back Tension	(gr-cm)	5
Pad Pressure	(gr)	—
Consuming Current in Playback VR min.	less than (mA)	320 (REC) 180 (PLAY)
Pressure Roller Pressure	(gr)	350 − 500

SCHEMATIC DIAGRAM MODEL RQ-232S



STANDARD VOLTAGE/CURRENT CHART

Check Point	Recording	Playback	Check Point	Recording	Playback
①	−0.48 V	−0.48 V	⑬	−8.90 V	−8.90 V
②	−0.04 V	−0.04 V	⑭	−0.50 V	−0.50 V
③	−0.20 V	−0.20 V	⑮	−0.0175 V	−0.0175 V
④	−0.76 V	−0.76 V	⑯	−6.10 V	−6.10 V
⑤	−0.48 V	−0.48 V	⑰	−0.26 V	−0.26 V
⑥	−0.53 V	−0.53 V	⑱	−0.60 V	−0.60 V
⑦	−1.40 V	−1.40 V	⑲	−6.10 V	−6.10 V
⑧	−0.32 V	−0.32 V	⑳	−2.30 V	−2.30 V
⑨	−0.86 V	−0.86 V	㉑	−6.25 V	—
⑩	−5.10 V	−5.10 V	㉒	8 mA	8 mA
⑪	−0.42 V	−0.42 V	㉓	110 mA	—
⑫	−1.04 V	−1.04 V			

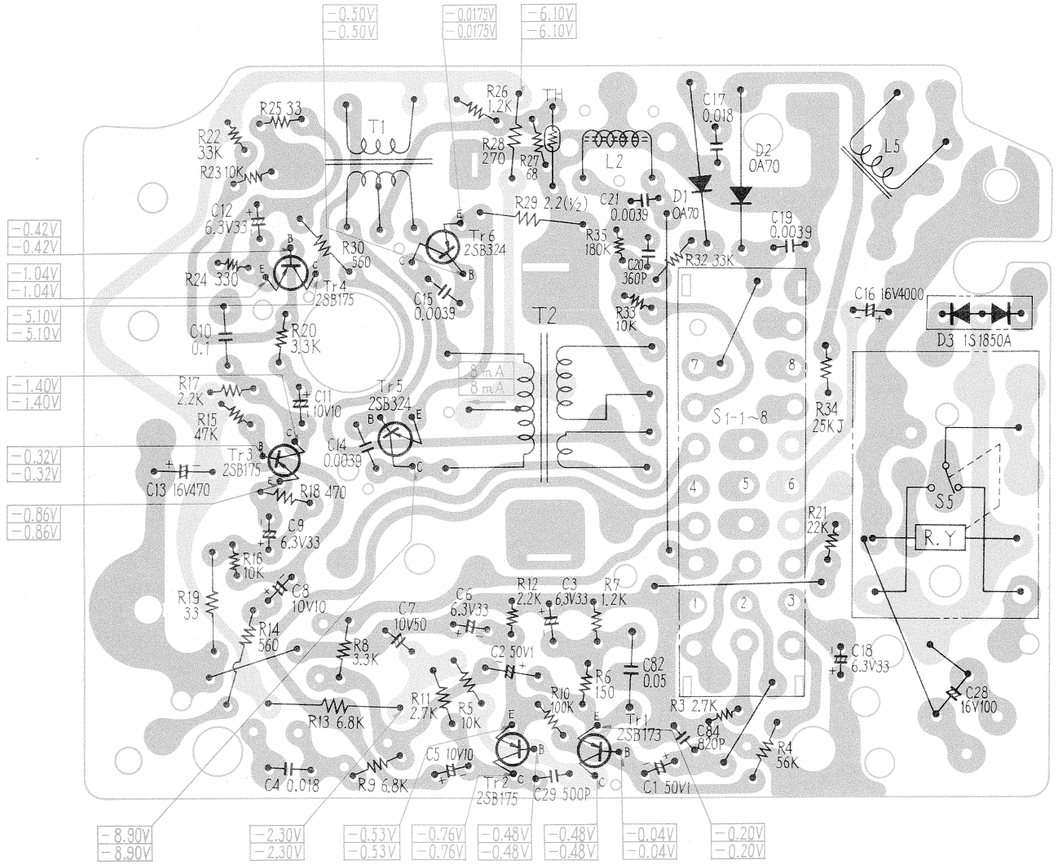
NOTE: All measurements are under no signal conditions with volume at minium position.
Use M-type VTVM for AC voltage measurements and P-type VTVM for DC voltage measurements.

NOTE:

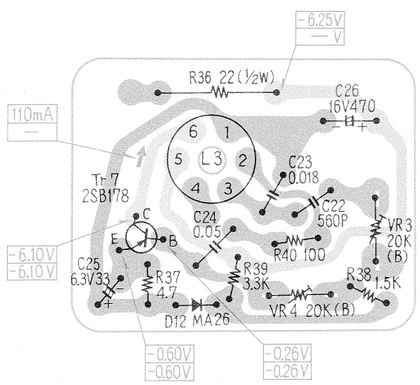
1. S1-1～S1-8..... Record/Playback Selector Switch (Shown in Playback).
2. S2-1～S2-3..... SP Monitor/OFF/ARC Selector Switch (Shown in SP Monitor/OFF).
3. S3-1～SS-5..... Tape/Radio Selector Switch (Shown in Tape).
4. S4 ..... Power Switch (Leaf Switch).
5. S5 ..... AC/DC Selector Switch (Relay).
6. S6-1～S6-4..... Band Selector Switch (Shown in FM).
7. S7 ..... AFC Switch (Shown in ON).
8. S8-1～S8-2..... AC Voltage Selector Switch.
9. Resistors are 1/4 watt unless specified otherwise.
   K=1,000Ω, M=1,000,000Ω.
10. Capacitors are microfarad (μF) unless specified otherwise.
    P=Micro-microfarads.
11. Symbols put at the head of capacity values show deviations.
    P=−20～+80%, M=±20%, K=±10%, J=±5%,
    C=±0.25 pF, D=±0.5 pF.
12. Encircled numbers (○) show the checkpoints for voltage and current.
    The values are marked in the standard voltage/current chart.

CIRCUIT BOARD MODEL RQ-234S

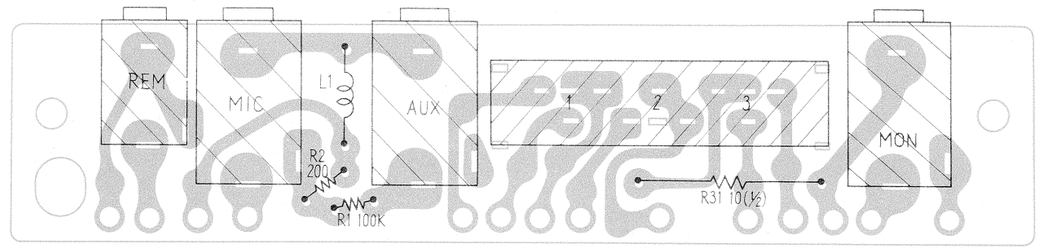
MAIN CIRCUIT BOARD



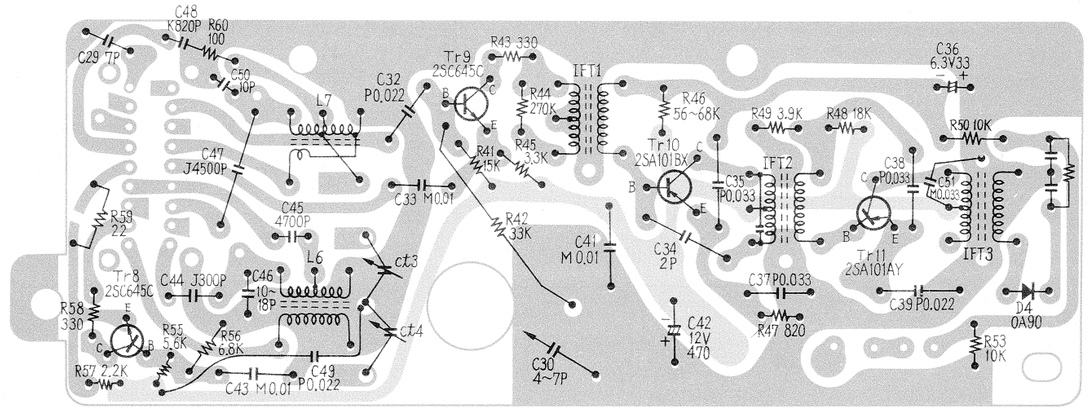
OSC CIRCUIT BOARD



JACK CIRCUIT BOARD



RADIO CIRCUIT BOARD



NOTE:
The circuit shown in red on the conductor side is −B circuit.
Values indicated in ▭ are DC voltages between the chassis and electrical parts.
The upper values should be measured during recording and the lower values during playback.

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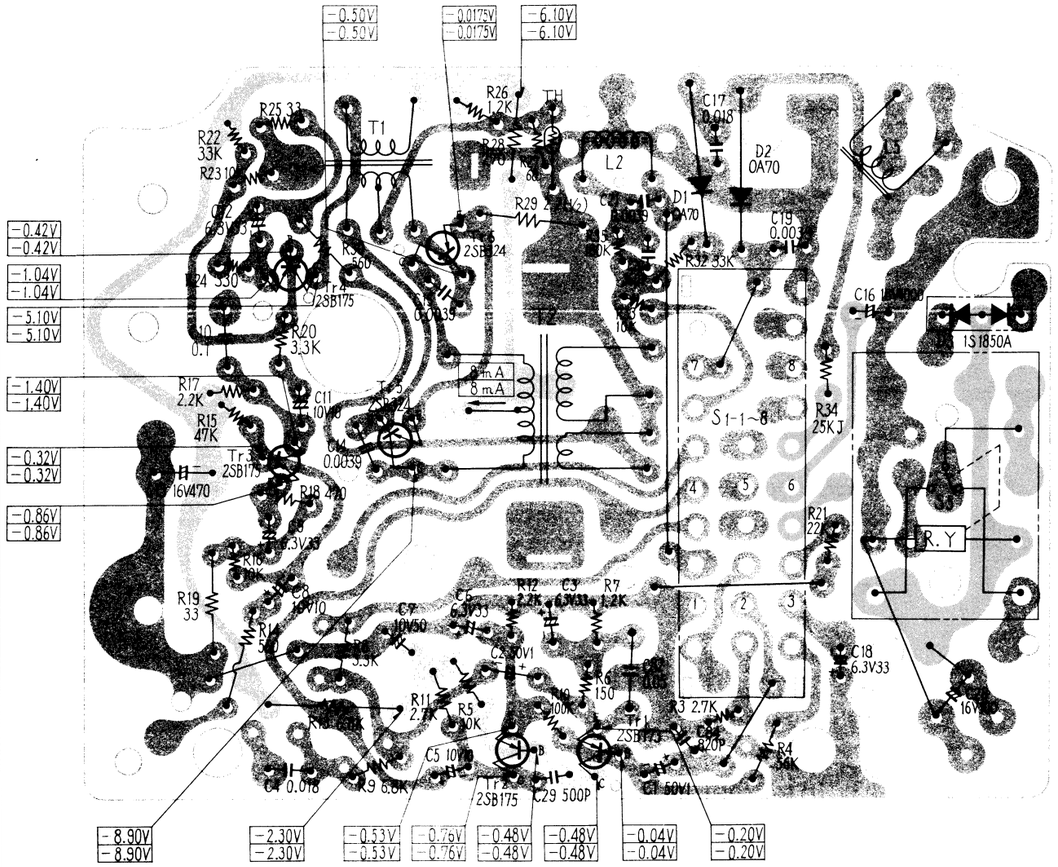
MAIN CIRCUIT BOARD



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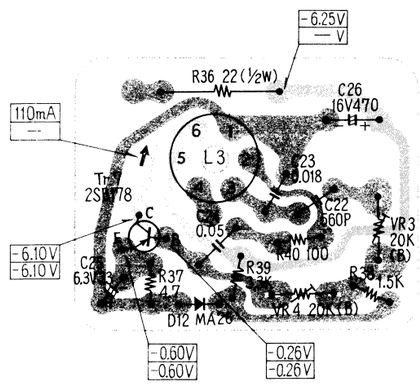

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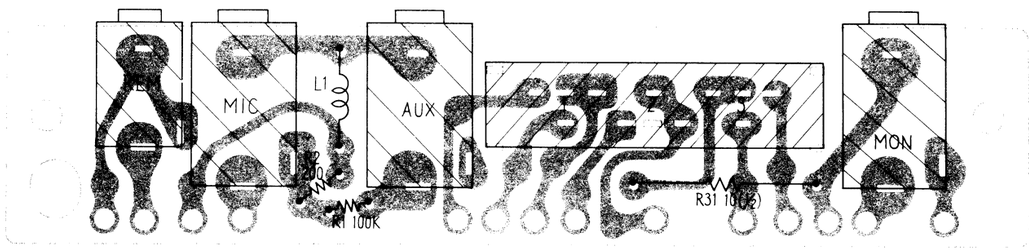

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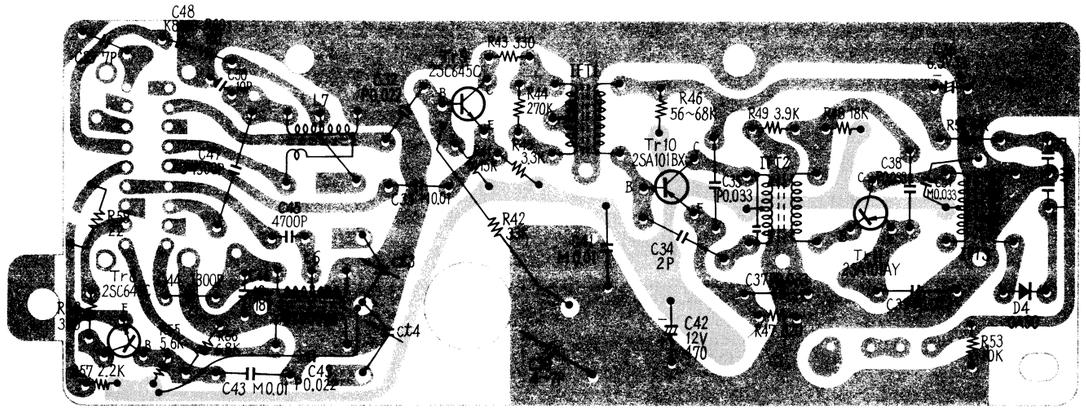

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